AMENDMENTS TO THE CLAIMS

Claims 1-25   (Canceled)

26. (New) A communication processing device that links a home electric device to a network, characterized by comprising:

a communication portion that sends/receives data to/from the home electric device;

a detection portion that detects a communication error status with the home electric device;

a storage portion that stores the communication error status detected by the detection portion; and

a setting portion that sets a transmission rate with the home electric device on a basis of a last communication error status stored in the storage portion and a latest communication error status detected by the detection portion.

27. (New) The communication processing device according to Claim 26, further comprising:

an identification portion that identifies a type of the home electric device as any one of a normally OFF home electric device for which a power supply is switched OFF when not in use and the power supply is switched ON when used, an always ON home electric device that is kept run with a power supply being kept switched ON, and a stand-by home electric device for which a power supply is switched to a stand-by state when not in use and the power supply is switched ON when used,

wherein the setting portion sets the transmission rate with the home electric device on the basis of the last communication error status stored in the storage portion and the latest communication error status detected by the detection portion depending on the type of the home electric device identified by the identification portion.

28. (New) The communication processing device according to Claim 27, wherein:

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the storage portion includes a normally OFF storage portion that stores the communication error status detected by the detection portion when the home electric device is the normally OFF home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of the last communication error status stored in the normally OFF storage portion and the latest communication error status detected by the detection portion when the home electric device is the normally OFF home electric device.

29. (New) The communication processing device according to Claim 28, wherein:

the detection portion detects a communication error ratio with the normally OFF home electric device from a time at which the power supply is switched ON to a time at which the power supply is switched OFF when the home electric device is the normally OFF home electric device;

the normally OFF storage portion stores the communication error ratio detected by the detection portion when the home electric device is the normally OFF home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of a last communication error ratio stored in the normally OFF storage portion and a latest communication error ratio detected by the detection portion when the home electric device is the normally OFF home electric device.

30. (New) The communication processing device according to Claim 27, wherein:

the storage portion includes an always ON storage portion that stores the communication error status detected by the detection portion when the home electric device is the always ON home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of the last communication error status stored in the always ON storage portion and the latest communication error status detected by the detection portion when the home electric device is the always ON home electric device.

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31. (New) The communication processing device according to Claim 30, wherein:

the detection portion detects a communication error ratio with the home electric device for every certain period when the home electric device is the always ON home electric device;

the always ON storage portion stores the communication error ratio detected by the detection portion when the home electric device is the always ON home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of a last communication error ratio stored in the always ON storage portion and a latest communication error ratio detected by the detection portion when the home electric device is the always ON home electric device.

32. (New) The communication processing device according to Claim 27, wherein:

the storage portion includes a stand-by storage portion that stores the communication error status detected by the detection portion when the home electric device is the stand-by home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of the last communication error status stored in the stand-by storage portion and the latest communication error status detected by the detection portion when the home electric device is the stand-by home electric device.

33. (New) The communication processing device according to Claim 32, wherein:

the detection portion detects a communication error ratio with the home electric device for every certain period when the home electric device is the stand-by home electric device;

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the always ON storage portion stores the communication error ratio detected by the detection portion when the home electric device is the stand-by home electric device; and

the setting portion sets the transmission rate with the home electric device on the basis of a last communication error ratio stored in the stand-by storage portion and a latest communication error ratio detected by the detection portion when the home electric device is the stand-by home electric device.

34.   (New)   The communication processing device according to Claim 29, wherein:

the setting portion sets a transmission rate lower than a transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are equal to or higher than a specific threshold value, and sets a transmission rate higher than the transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are lower than the specific threshold value.

35.   (New)   The communication processing device according to Claim 31, wherein:

the setting portion sets a transmission rate lower than a transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are equal to or higher than a specific threshold value, and sets a transmission rate higher than the transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are lower than the specific threshold value.

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36. (New)   The communication processing device according to Claim 33, wherein:

the setting portion sets a transmission rate lower than a transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are equal to or higher than a specific threshold value, and sets a transmission rate higher than the transmission rate at which the latest communication error ratio is detected when both the last communication error ratio stored in the storage portion and the latest communication error ratio detected by the detection portion are lower than the specific threshold value.

37. (New)   A computer-readable recording medium in which a communication program is recorded, characterized by causing a microcomputer incorporated in a communication processing device that links a home electric device to a network to function as portions as follows:

a communication portion that sends/receives data to/from the home electric device;

a detection portion that detects a communication error status with the home electric device;

a storage portion that stores the communication error status detected by the detection portion; and

a setting portion that sets a transmission rate with the home electric device on a basis of a last communication error status stored in the storage portion and a latest communication error status detected by the detection portion.

38. (New)   A communication processing device that links a home electric device to a network, characterized by comprising:

a communication portion that sends/receives data to/from the home electric device;

a save portion that saves plural transmission rates settable in the communication processing device; and

a setting portion that sets a transmission rate on a basis of plural transmission rates settable in the home electric device and received at the communication portion and the plural transmission rates saved in the save portion,
wherein:

the communication portion sends a transmission rate notice to the home electric device to inform a transmission rate that the setting portion is to set before the setting portion sets the transmission rate;

the setting portion sets the transmission rate when the transmission rate informed by a reply to the transmission rate notice from the home electric device received at the communication portion coincides with the transmission rate to be set; and

the communication portion sends confirmation data to the home electric device to confirm that communications are enabled with the home electric device at the set transmission rate after the setting portion sets the transmission rate.

39. (New) The communication processing device according to Claim 38, wherein:

the communication portion sends the confirmation data to the home electric device when a predetermined time has passed since the reply to the transmission rate notice is received from the home electric device.

40. (New) A computer-readable recording medium in which a communication program is recorded, characterized by causing a microcomputer incorporated in a communication processing device that links a home electric device to a network to function as portions as follows:

a communication portion that sends/receives data to/from the home electric device;

a save portion that saves plural transmission rates settable in the communication processing device; and

a setting portion that sets a transmission rate on a basis of plural transmission rates settable in the home electric device and received at the communication portion and the plural transmission rates saved in the save portion,

wherein:

the communication portion sends a transmission rate notice to the home electric device to inform a transmission rate that the setting portion is to set before the setting portion sets the transmission rate;

the setting portion sets the transmission rate when the transmission rate informed by a reply to the transmission rate notice from the home electric device received at the communication portion coincides with the transmission rate to be set; and

the communication portion sends confirmation data to the home electric device to confirm that communications are enabled with the home electric device at the set transmission rate after the setting portion sets the transmission rate.

41. (New) A home electric device that is linked to a network via a communication processing device, characterized by comprising:

a communication portion that sends/receives data to/from the communication processing device;

a storage portion that stores a communication error status with the communication processing device; and

a setting portion that sets a transmission rate with the communication processing device on a basis of communication error statuses in past times stored in the storage portion,
wherein:

the storage portion stores a transmission rate at which communications with the communication processing device failed; and

the setting portion sets a transmission rate lower than the transmission rate at which communications with the communication processing device failed when the transmission rate at which communications with the communication processing device failed is stored in the storage portion.

42. (New) A computer-readable recording medium in which a communication program is recorded, characterized by causing a microcomputer incorporated in a home

electric device that is linked to a network via a communication processing device to function as portions as follows:

a communication portion that sends/receives data to/from the communication processing device;

a storage portion that stores a communication error status with the communication processing device; and

a setting portion that sets a transmission rate with the communication processing device on a basis of communication error statuses in past times stored in the storage portion,

wherein:

the storage portion stores a transmission rate at which communications with the communication processing device failed; and

the setting portion sets a transmission rate lower than the transmission rate at which communications with the communication processing device failed when the transmission rate at which communications with the communication processing device failed is stored in the storage portion.

43. (New) A home network system, comprising:

the communication processing device according to Claim 26; and

a home electric device that is linked to a network via a communication processing device, characterized by comprising:

a communication portion that sends/receives data to/from the communication processing device;

a storage portion that stores a communication error status with the communication processing device; and

a setting portion that sets a transmission rate with the communication processing device on a basis of communication error statuses in past times stored in the storage portion,

wherein:

the storage portion stores a transmission rate at which communications with the communication processing device failed; and

the setting portion sets a transmission rate lower than the transmission rate at which communications with the communication processing device failed when the transmission rate at which communications with the communication processing device failed is stored in the storage portion.

44. (New) A home network system, comprising:

the communication processing device according to Claim 38; and

a home electric device that is linked to a network via a communication processing device, characterized by comprising:

a communication portion that sends/receives data to/from the communication processing device;

a storage portion that stores a communication error status with the communication processing device; and

a setting portion that sets a transmission rate with the communication processing device on a basis of communication error statuses in past times stored in the storage portion,

wherein:

the storage portion stores a transmission rate at which communications with the communication processing device failed; and

the setting portion sets a transmission rate lower than the transmission rate at which communications with the communication processing device failed when the transmission rate at which communications with the communication processing device failed is stored in the storage portion.